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NL-04-0952

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Docket No.: 50-364

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant – Unit 2
Licensee Event Report 2004-003-00
Technical Specification 3.0.4 Violation Due to
Turbine Driven Auxiliary Feedwater Pump Inoperable

Ladies and Gentlemen:

Joseph M. Farley Nuclear Plant – Licensee Event Report (LER) No. 2004-003-00 is being submitted in accordance with 10 CFR 50.73(a)(2)(i)(B).

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

L. M. Stinson

LMS/WAS/sdl

Enclosure: Licensee Event Report 2004-003-00

cc: Southern Nuclear Operating Company
Mr. J. B. Beasley, Jr., Executive Vice President
Mr. D. E. Grissette, General Manager – Plant Farley
RTYPE: CFA04.054; LC# 14048

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. S. E. Peters, NRR Project Manager – Farley
Mr. C. A. Patterson, Senior Resident Inspector – Farley

IE22

NRC FORM 366 (7-2001)			U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 <small>Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>						EXPIRES 7-31-2004		
LICENSEE EVENT REPORT (LER) <small>(See reverse for required number of digits/characters for each block)</small>														
FACILITY NAME (1) Joseph M. Farley Nuclear Plant - Unit 2						DOCKET NUMBER (2) 05000364			PAGE (3) 1 OF 4					
TITLE (4) Technical Specification 3.0.4 Violation Due to Turbine Driven Auxiliary Feedwater Pump Inoperable														
EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)					
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER				
04	09	2004	2004	- 003 -	00	06	04	2004	FACILITY NAME	DOCKET NUMBER				
OPERATING MODE (9)		3		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)										
POWER LEVEL (10)		00		20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)				
				20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)				
				20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)		73.71(a)(4)				
				20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)				
				20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER Specify in Abstract below or in NRC Form 366A				
				20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)						
				20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)						
				20.2203(a)(2)(v) <input checked="" type="checkbox"/>		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)						
				20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)						
				20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)						
LICENSEE CONTACT FOR THIS LER (12)														
NAME D. E. Grissette, General Manager Nuclear Plant						TELEPHONE NUMBER (Include Area Code) 334-899-5156								
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)														
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX				
SUPPLEMENTAL REPORT EXPECTED (14)						EXPECTED SUBMISSION DATE (15)		MONTH		DAY				
YES (If yes, complete EXPECTED SUBMISSION DATE).						<input checked="" type="checkbox"/> NO								
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)														
<p>From April 9, 2004 at 1548 until April 10, 2004 at 0604 Farley Nuclear Plant (FNP) Unit 2 was operated contrary to Technical Specification 3.0.4 in that the unit entered Mode 3 without the operability requirements of Technical Specification 3.7.5 satisfied. Technical Specification 3.7.5 requires three operable trains of Auxiliary Feed Water (AFW) in Modes 1, 2, and 3. Corrective maintenance completed on April 8, 2004 at 0700 (while in Mode 4) caused the Turbine Driven Auxiliary Feedwater Pump (TDAFWP) to be inoperable due to the TDAFWP speed control wiring being inadvertently reversed from the required operable configuration. On April 9, 2004 at 1548, Unit 2 entered Mode 3. On April 10, 2004 at 0603, the TDAFWP turbine tripped on overspeed upon being started for normal surveillance testing. Investigation determined that the TDAFWP was made inoperable due to the wiring errors introduced during corrective maintenance on April 8, 2004.</p> <p>The cause of this event was poor work practices in that troubleshooting procedures were not followed when maintenance personnel disconnected the speed control wiring without documenting the wires lifted or the locations from which each was disconnected. A contributing cause was inadequate configuration control in that the design drawing configuration did not match the as-found TDAFWP speed control wiring configuration.</p> <p>Involved personnel have been counseled on adhering to the requirements of the trouble shooting program. A Training Advisory Notice has been sent to Maintenance personnel informing them of the details of this event. This event and the consequences of not following trouble shooting procedures will be discussed during the regularly scheduled maintenance continuing training program by September 30, 2004. The wiring for the TDAFWP speed control was returned to the required configuration and surveillance testing was performed which verified the operability of the TDAFWP. The wiring configuration for this circuit will be reconciled between field wiring and plant drawings for both FNP units and applicable drawing change requests will be submitted by August 15, 2004.</p>														

LICENSEE EVENT REPORT (LER)

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Joseph M. Farley Nuclear Plant - Unit 2	05000364	2004	- 003	- 00	2 OF 4

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

Westinghouse -- Pressurized Water Reactor
Energy Industry Identification Codes are identified in the text as [XX]

Description of Event

On April 8, 2004 with the unit in Mode 4 during heatup at the end of a refueling outage, routine outage preventive maintenance (PM) incorrectly identified an apparent open circuit in a coil in the Turbine Driven Auxiliary Feedwater Pump (TDAFWP) [BA] speed controller. Efforts to troubleshoot resulted in leads in this circuit being lifted and then relanded. During this process, the lifted leads and the terminals they were lifted from were not documented as required by maintenance procedures. Instead, the leads were relanded using a design drawing. It was not recognized at this time that the as-found plant configuration for the speed controller was different from plant drawings. Due to this difference, the leads were relanded in a configuration reversed from the as-found condition. A Deficiency Report was written to repair the apparent open circuit which resulted in tightening a loose connection and then measuring the correct resistance per the PM procedure. Since the coil resistance was measured satisfactorily, no additional post maintenance testing was performed.

On April 9, 2004 at 1548, Unit 2 entered Mode 3.

On April 10, 2004 at 0604 during surveillance testing per SR 3.7.5.2, the TDAFWP tripped on overspeed and the Required Action of Technical Specification 3.7.5 was entered. During the troubleshooting subsequent to the pump trip, it was determined that when the leads were relanded per the design drawing, the as-left wiring configuration was different from the as-found configuration. The as-left wiring configuration had reversed the coil polarity and therefore, had reversed the response of the coil to control signals. On initial starts of the TDAFWP, the pump's turbine receives an initial "puff" of steam which causes the turbine speed to begin to increase. The normal response of the controller to this initial speed increase is to begin to close the governor valve in order to limit the speed of the pump. With the wires reversed, when the controller called for the governor valve to close to reduce the turbine speed, the governor valve opened instead of closing. The additional opening of the governor valve instead of closing caused the turbine to continue to increase in speed. This resulted in an overspeed trip of the TDAFWP. The TDAFWP was thereby inadvertently rendered inoperable. Following repair of the improperly landed wires, the TDAFWP was tested satisfactorily on April 11, 2004 at 0304. The action statement of Technical Specification 3.7.5 was exited on April 11, 2004 at 0541.

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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

A review of the event determined that, from April 9, 2004 at 1548 until April 10, 2004 at 0604, Farley Nuclear Plant Unit 2 was operated contrary to Technical Specification 3.0.4 in that the unit entered Mode 3 with the operability requirements of Technical Specification 3.7.5 not met. Technical Specification 3.7.5 requires three operable trains of Auxiliary Feed Water (AFW) in Modes 1, 2, and 3. However, Surveillance Requirement SR 3.7.5.2 cannot be performed prior to Mode 3 entry and is not required until 24 hours after ≥ 1005 psig steam generator pressure is reached. Therefore, the inoperability introduced during preventive maintenance during the unit outage was not detected until performance of SR 3.7.5.2 after Mode 3 entry.

Cause of Event

The cause of this event was poor work practices in that troubleshooting procedures were not followed when maintenance personnel disconnected the speed control wiring without documenting the wires lifted or the locations from which each was disconnected. A contributing cause was inadequate configuration control in that the design drawing configuration did not match the as-found TDAFWP speed control wiring configuration.

Safety Assessment

A single AFW pump is capable of supporting a normal cooldown to Mode 4 conditions. Two pumps are required for a number of accident conditions. This event occurred during plant heatup following a refueling outage. In this condition, the decay heat load requirements are minimal and a single MDAFWP would be expected to maintain adequate heat removal capability. Therefore, the health and safety of the public were unaffected by this event.

This event does not represent a Safety System Functional Failure.

Corrective Actions

Involved personnel have been counseled on adhering to the requirements of the troubleshooting program.

A Training Advisory Notice has been sent to Maintenance personnel informing them of the details of this event and the consequences of not following troubleshooting procedures.

This event and the consequences of not following troubleshooting procedures will be discussed during the regularly scheduled maintenance continuing training program by September 30, 2004.

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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

The wiring for the TDAFWP speed control was returned to the required configuration and surveillance testing was performed which verified the operability of the TDAFWP.

The wiring configuration for this circuit will be reconciled between field wiring and plant drawings for both FNP units and applicable drawing change requests will be submitted by August 15, 2004.

Additional Information

The following LER has been submitted in the past two years concerning poor work practices, configuration control, or procedure adherence:

LER 2002-003-00, Unit 1, Condensate Storage Tank piping Missile Barrier not in place.

Coincident with this event, on April 9, 2004, at 1810, the 2A Motor Driven Auxiliary Feedwater Pump (MDAFWP) was also declared inoperable due to a tripped breaker for the pump room cooler fan. The fan breaker starter coil was found shorted and replaced. The fan motor was successfully started, and the MDAFWP LCO was cleared at 0610 on April 10, 2004. Technical Specification 3.7.5, Required Action C.2 for two inoperable AFW trains, requires that the unit be placed in Mode 4 within 12 hours if at least one AFW train is not returned to operable status. The MDAFWP was returned to service within 12 hours. Therefore, the Completion Time of Required Action C.2 was not exceeded.